(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 29 December 2004 (29.12.2004)

PCT

(10) International Publication Number WO 2004/114518 A1

(51) International Patent Classification7:

H03F 1/34

(21) International Application Number:

PCT/EP2004/050657

(22) International Filing Date: 30 April 2004 (30.04.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 0313928.4

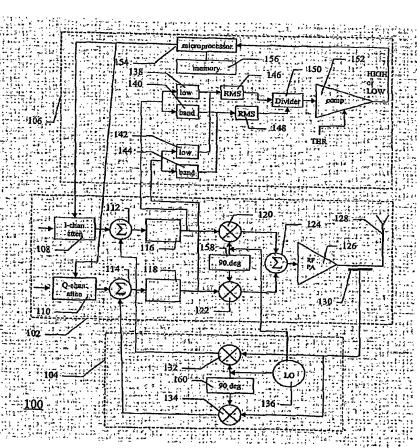
17 June 2003 (17.06.2003) G

- (71) Applicant (for all designated States except US): MO-TOROLA INC [US/US]; 1303 E.Algonquin Road, Schaumburg, Illinois 60196 (US).
- (71) Applicant (for BW only): MOTOROLA LIMITED [GB/GB]; Jays Close, Viables Industrial Estate, Basingstoke Hampshire RG22 4PD (GB).

- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BEN-AYUN, Moshe [IL/IL]; Motorola Israel Limited, 3 Kremenetski Street, 67899 Tel Aviv (IL). BEN-SALMON, Avi [IL/IL]; Motorola Israel Limited, 3 Kremenetski Street, 67899 Tel Aviv (IL). ROZENTAL, Mark [IL/IL]; Motorola Israel Limited, 3 Kremenetski Street, 67899 Tel Aviv (IL).
- (74) Agent: MCCORMACK, Derek, J.; Motorola European Intellectual Property Operations, Midpoint, Alencon Link, Basingstoke Hampshire RG21 7PL (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,

[Continued on next page]

(54) Title: CARTESIAN LOOP TRANSMITTER AND METHOD OF ADJUSTING AN OUTPUT LEVEL OF SUCH TRANS-MITTER



(57) Abstract: In accordance with the present invention there is those provided a Cartesian loop transmitter (100) having an isolator eliminator circuitry (106) comprising a set of low pass (138, 142) and band pass (140, 144) filters for each of an I- and Q-channels, root mean square detectors (146, 148) and a divider (150) connected to a comparator (152) are received by a microporcessor (154) which controls attenuation setting. There is also provided a method of adjusting an output level of such transmitter (100). Said method comprises the step of measuring an on-channel signal level (206) and a noise level (208) and then calculating a ratio of said noise to said on-channel signal (214). If the ratio exceeds a defined threshold (216) an attenuation of the input attenuators is increased (218).

) 2004/114518 A1

- TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

as to the identity of the inventor (Rule 4.17(i)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
- of inventorship (Rule 4.17(iv)) for US only

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.